

## WHAT IS CLAIMED IS:

1. A method of detecting the presence of a phospholipid in a biological material, comprising:
  - a) subjecting a biological material to a binding agent selected from the group consisting of lactadherin, a  
5 fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin;
  - b) allowing binding between any phospholipid present and the binding agent; and
  - 10 c) detecting the presence of any phospholipid bound to the binding agent.
2. The method of Claim 1, wherein:  
the phospholipid comprises phosphatidylserine.
3. The method of Claim 1, wherein:  
the phospholipid comprises a phospho-L-serine moiety of phosphatidylserine.

4. The method of Claim 2, wherein:  
the biological material comprises a cell, a cell membrane, a cell appendage, a cell fragment, a lipoprotein, or a cellular particle.
5. The method of Claim 4, wherein:  
any binding in step b) is independent of any  $\text{Ca}^{++}$  or phosphatidylethanolamine.
6. The method of Claim 4, wherein:  
any binding in step b) is increased with increasing of cell membrane curvature.
7. The method of Claim 2, wherein:  
any binding in step b) increases proportionally to the content of phosphatidylserine over a range of about 0-2%.
8. The method of Claim 4, wherein:  
the cell membrane comprises a curved region.

9. A method of blocking or reducing binding of a protein to a binding site, comprising:

subjecting a binding site to a binding agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin.

10. The method of Claim 9, wherein:

the binding site comprises a phospholipid or a lipoprotein.

11. The method of Claim 10, wherein:

the phospholipid comprises phosphatidylserine.

12. The method of Claim 10, wherein:

the phospholipid comprises a phospho-L-serine moiety of phosphatidylserine.

13. A method of detecting phosphatidylserine-expressing cells, comprising:

a) subjecting a biological material including, or suspect of including, phosphatidylserine-expressing cells to a binding agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional

equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin;

- b) allowing binding between any cells present and the binding agent; and
- c) detecting the presence of any phosphatidylserine-expressing cells bound to the binding agent.

14. The method of Claim 13, wherein:

the phosphatidylserine-expressing cells are selected from the group consisting of apoptotic cells, malignant cells, undifferentiated cells, immature cells, integrin-displaying cells, and a combination thereof.

15. A method of protecting a biological material from the action of an enzyme, comprising:

- a) subjecting a biological material to be protected from an enzyme to a binding agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin; and
- b) allowing binding between the biological material and the binding agent to protect the biological material from the enzyme.

16. A pharmacological bridge ligand, comprising:  
lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, or a functional equivalent of a fragment of lactadherin.
17. A composition for detecting the presence of a phospholipid in a biological material, comprising:  
a) a binding agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin; and  
b) a suitable carrier.
18. A kit for detecting the presence of a phospholipid in a biological material, comprising:  
a) a binding agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin; and  
b) instructions for use of the binding agent.
19. The kit of Claim 18, wherein:  
the phospholipid comprises phosphatidylserine.

20. The kit of Claim 18, wherein:  
the phospholipid comprises a phospho-L-serine moiety of phosphatidylserine.
21. The method of Claim 13, wherein:  
the phosphatidylserine - expressing cells comprise blood platelets or nucleated cells.
22. A method of blocking or reducing the procoagulant activity of a cell, comprising:  
a) subjecting a cell to an agent selected from the group consisting of lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, and a functional equivalent of a fragment of lactadherin.
23. The method of Claim 22, wherein:  
the agent blocks or reduces the procoagulant activity of the cell by binding with a phospholipid exposed on the cell membrane.
24. The method of Claim 23, wherein:  
the phospholipid comprises phosphatidylserine.

25. The method of Claim 24, wherein:  
the cell comprises a blood platelet.
26. A probe for detecting the presence of a phospholipid in a biological material, comprising:  
lactadherin, a fragment of lactadherin, a functional equivalent of lactadherin, or a functional equivalent of a fragment of lactadherin.
27. The probe of Claim 26, wherein:  
the phospholipid comprises phosphatidylserine.